STIC Search Report
EIC 2100

STIC Database Tracking Number: 150540

TO: Brian R Peugh **Location: RND 2A61** **Art Unit : 2187** **Thursday, May 05, 2005** **Case Serial Number: 10/075514**	**From: David Holloway** **Location: EIC 2100** **RND 4B19** **Phone: 2-3528** **david.holloway@uspto.gov**

Search Notes

Dear Examiner Peugh,

Attached please find your search results for above-referenced case.
Please contact me if you have any questions or would like a re-focused search.

David

Access DB# 150540

SEARCH REQUEST FORM

Scientific and Technical Information Center

(47)

ster's Full Name: Brian R. Peral Examiner #: 77021 Date: 4/12/05
nit: 2187 Phone Number 30-2-4199 Serial Number: 10/075,516
Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

e than one search is submitted, please prioritize searches in order of need.

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rovide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or f the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if Please attach a copy of the cover sheet, pertinent claims, and abstract.

f Invention: Efficient Service Management in home gateways

ors (please provide full names): See attached

t Priority Filing Date: 2/13/02

quence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the ate serial number.*

me (service) Gateway
r claim 1
- Keywords underlined
- Bracketed area most important feature of claim

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BY: _____

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USE ONLY

Doucet Holloway
one #: 2-3528
cation: RND 4B19
ier Picked Up: 5-5-05
leted: 5-5-05
ep & Review Time: 65
p Time: _____
e: 165

Type of Search		Vendors and cost where applicable	
NA Sequence (#)		STN	
AA Sequence (#)		Dialog	✓
Structure (#)		Questel/Orbit	
Bibliographic	✓	Dr.Link	
Litigation		Lexis/Nexis	
Fulltext	✓	Sequence Systems	
Patent Family		WWW/Internet	✓
Other		Other (specify)	

0 (8-01)

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Set     Items   Description
S1         48   AU=(KAMEL I? OR KAMEL, I?)
S2          6   AU=(ELBASSIONI K? OR ELBASSIONI, K?)
S3       1816   AU=(CHEN B? OR CHEN, B?)
S4          3   S1 AND S2 AND S3
S5         21   (S1 OR S2 OR S3) AND IC=G06F-012
S6         23   S4 OR S5
S7         23   IDPAT (sorted in duplicate/non-duplicate order)
S8         17   IDPAT (primary/non-duplicate records only)
File 344:Chinese Patents Abs Aug 1985-2004/May
         (c) 2004 European Patent Office
File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)
         (c) 2005 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2005/Apr W04
         (c) 2005 European Patent Office
File 349:PCT FULLTEXT 1979-2005/UB=20050428,UT=20050421
         (c) 2005 WIPO/Univentio
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200527
         (c) 2005  Thomson Derwent
```

8/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015282278 **Image available**
WPI Acc No: 2003-343210/200332
XRPX Acc No: N03-274573

Managing memory resource in service gateway environment by building dynamic programming table for service instances to indicate achievable memory space

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); CHEN B (CHEN-I); ELBASSIONI K (ELBA-I); KAMEL I (KAME-I)
Inventor: **CHEN B** ; **ELBASSIONI K** ; **KAMEL I**

Number of Countries: 102 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200332183	A2	20030417	WO 2002US32538	A	20021011	200332 B
US 20030154356	A1	20030814	US 200275514	A	20020213	200355
EP 1442382	A2	20040804	EP 2002801033	A	20021011	200451
			WO 2002US32538	A	20021011	
AU 2002334973	A1	20030422	AU 2002334973	A	20021011	200461
JP 2005505832	W	20050224	WO 2002US32538	A	20021011	200516
			JP 2003535080	A	20021011	

Priority Applications (No Type Date): US 200275514 A 20020213; US 2001329219 P 20011012
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200332183	A2	E	21	G06F-015/16	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

US 20030154356	A1			G06F-012/00	
EP 1442382	A2	E		G06F-015/16	Based on patent WO 200332183

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

AU 2002334973	A1			G06F-015/16	Based on patent WO 200332183
JP 2005505832	W		39	G06F-009/46	Based on patent WO 200332183

Abstract (Basic): WO 200332183 A2

NOVELTY - Method consists in receiving a service request having an associated memory space requirement exceeding total available memory space associated with the gateway environment, determining the number of dependent service instances for each service instance, determining an accumulative memory space requirement for each service instance, and identifying a subset of service instance whose memory space requirement exceeds that of the service request: The identified subset of service instances is deleted and a ratio for each instance is determined as the accumulative memory space requirement divided by the number of dependent service instances to select the instance with the largest ratio.

USE - Method is for managing application services in a limited memory environment such as a home gateway.

ADVANTAGE - Method is efficient.

DESCRIPTION OF DRAWING(S) - The figure shows a flow chart for memory resource management.

pp; 21 DwgNo 3/6

Title Terms: MANAGE; MEMORY; RESOURCE; SERVICE; GATEWAY; ENVIRONMENT; BUILD ; DYNAMIC; PROGRAM; TABLE; SERVICE; INSTANCE; INDICATE; ACHIEVE; MEMORY; SPACE
Derwent Class: T01

International Patent Class (Main): G06F-009/46; **G06F-012/00** ; G06F-015/16
File Segment: EPI

8/5/11 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014165217 **Image available**
WPI Acc No: 2001-649445/200175
XRPX Acc No: N01-485382

Scalable multimedia file system supports workstation to perform requested file operation, when sufficient network bandwidth and disk capacity are available

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI SANGYO KK (MATU)
Inventor: **KAMEL I M** ; MOHAPATRA P; MUKHERJEE S; **KAMEL I**

Number of Countries: 004 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 10036726	A1	20010329	DE 1036726	A	20000727	200175	B
GB 2357171	A	20010613	GB 200018082	A	20000725	200175	
JP 2001117807	A	20010427	JP 2000226653	A	20000727	200175	
GB 2357171	B	20011121	GB 200018082	A	20000725	200201	
US 6466978	B1	20021015	US 99362819	A	19990728	200271	

Priority Applications (No Type Date): US 99362819 A 19990728
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 10036726	A1		74	H04L-012/00	
GB 2357171	A			G06F-017/30	
JP 2001117807	A		145	G06F-012/00	
GB 2357171	B			G06F-017/30	
US 6466978	B1			G06F-015/173	

Abstract (Basic): DE 10036726 A1

NOVELTY - An access controller in cluster manager (404), regulates the file access request from workstation (408). A network status determination device and a disk status determination device determine network bandwidth and disk capacity, respectively response to file access request from workstation. The file system supports requested file operation, if available network bandwidth and disk capacity are sufficient.

DETAILED DESCRIPTION - The file system (400) is divided into clusters (401) having a disk (402), cluster manager (404) and file manager (406). Access controller in the cluster manager regulates the file access request from workstation (408). A network status determination device in the file manager, determines the available network bandwidth, in response to the access request from workstation. A disk status device determines the available disk capacity in response to the file access request. The system supports requested file operation if the available network bandwidth and disk capacity are sufficient. An INDEPENDENT CLAIM is also included for file access control method.

USE - Scalable multimedia file system with network backup storage device for e.g. remote lessons and education, multimedia entertainment, message processing and distribution, video-on-demand in hotels and companies, multimedia communication and advertisement.

ADVANTAGE - Supports multiple workstations, by sharing network load smoothly based on calculated network bandwidth and disk capacity. Minimizes network traffic by controlling file access request from workstation.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of hybrid file system.

File system (400)
Cluster (401)
Disk (402)
Cluster manager (404)
File manager (406)

Workstation (408)
pp; 74 DwgNo 9A/11
Title Terms: FILE; SYSTEM; SUPPORT; PERFORMANCE; REQUEST; FILE; OPERATE; SUFFICIENT; NETWORK; BANDWIDTH; DISC; CAPACITY; AVAILABLE
Derwent Class: T01; W01; W02; W04
International Patent Class (Main): **G06F-012/00** ; G06F-015/173; G06F-017/30 ; H04L-012/00
International Patent Class (Additional): G06F-003/06; G06F-015/16; H04L-009/06
File Segment: EPI

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Set     Items   Description
S1       2869   OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
            JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR SMARTHOUSE OR HOME)-
            (N)(SERVER? OR ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR
            UPNP OR HOMERF OR HOME()RF
S2    3032983   MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM
S3     910195   ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4    1297794   DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5    1523347   SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
            DEMAND?
S6    1959754   FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7    2251950   GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
            MIT?
S8    1841234   EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
            LM?
S9    2050461   ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10        14   S1 AND S2(2N)S3
S11        15   S1 AND (S2 OR S3) AND S4(3N)S5
S12     34560   S2 AND S8 AND S9
S13         3   S1 AND S12
S14       100   S2 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8 AND S9
S15      6554   S4 AND S5 AND (S7 OR S8) AND S9
S16       163   S15 AND (GATEWAY? OR SERVER? OR ROUTER?)
S17        20   S4(3N)S5 AND S16
S18         7   S14 AND (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19        54   S10 OR S11 OR S13 OR S17 OR S18
S20     11154   MC=T01-F05E
S21         3   S19 AND S20
S22        35   S19 AND IC=G06F
S23        35   S21 OR S22
S24        35   IDPAT (sorted in duplicate/non-duplicate order)
S25        33   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)
         (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200527
         (c) 2005  Thomson Derwent
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25/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016550185 **Image available**
WPI Acc No: 2004-708926/200469
Related WPI Acc No: 2002-255236; 2002-291082; 2002-462929; 2004-774468
XRPX Acc No: N04-562161

Data packet processing method used with wireless device, involves associating data of received data packet with software application

Patent Assignee: FILLEBROWN L A (FILL-I); GLOVER K M (GLOV-I); KAUTZ R D (KAUT-I)
Inventor: FILLEBROWN L A; GLOVER K M; KAUTZ R D
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20040193675	A1	20040930	US 2000212203	P	20000616	200469	B
			US 2001775042	A	20010201		

Priority Applications (No Type Date): US 2000212203 P 20000616; US 2001775042 A 20010201
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040193675	A1		16	G06F-015/16	Provisional application US 2000212203

Abstract (Basic): US 20040193675 A1

NOVELTY - A data packet is received through wireless protocol, and the data of the received packet is **associated** with a software **application** executing on a wireless server (140). The data is processed using the software application.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) information processing method;

(2) wireless client display updating method;

(3) method for utilizing computer system for information processing;

(4) method for utilizing computer system for updating wireless client display;

(5) computer system for data packet processing;

(6) computer readable medium storing data packet processing program;

(7) computer readable medium storing information processing program;

(8) computer readable medium storing wireless client display updating program;

(9) computer readable medium storing program for utilizing computer system for data packet processing;

(10) computer readable medium storing program for utilizing computer system for information processing;

(11) computer readable data signal storing data packet processing instruction; and

(12) computer **memory** storing data packet processing data structure.

USE - For processing data packet in wireless network e.g. local area network (LAN) and wide area network (WAN) connecting wireless device such as laptop, wireless tablet device with color touch screen display, smart phone, personal digital assistant, personal computer, wireless repeater, wireless infrared converter, and wireless smart appliance such as radio, television, cable box, light, alarm, microwave oven, washer, dryer, water faucet, heating oil pump and thermostat. Also used with network enabled application e.g. network enabled games, word processing application, database application, **scheduling** application, spreadsheet application, internet enabled application and wireless smart appliance application.

ADVANTAGE - Provides personalized wireless network that is inexpensive, scalable and flexible. Enables bandwidth efficient and

time efficient display updating process.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic representation of the personal wireless network.

wireless tablet devices (110,112,114)

microwave oven (116)

radio (118)

wireless router (120)

wireless server (140)

pp; 16 DwgNo 1/9

Title Terms: DATA; PACKET; PROCESS; METHOD; WIRELESS; DEVICE; ASSOCIATE; DATA; RECEIVE; DATA; PACKET; SOFTWARE; APPLY

Derwent Class: T01; W01

International Patent Class (Main): **G06F-015/16**

File Segment: EPI

25/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016428237 **Image available**
WPI Acc No: 2004-586152/200457
XRPX Acc No: N04-463538

Bundle reconfiguration system compares class, component and package contained in each bundle acquired by home gateway **, based on which class/component/package common to both bundles are determined for integrating the bundles**

Patent Assignee: SEIKO EPSON CORP (SHIH)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2004227240	A	20040812	JP 200313609	A	20030122	200457	B

Priority Applications (No Type Date): JP 200313609 A 20030122
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2004227240	A		40	G06F-009/54	

Abstract (Basic): JP 2004227240 A

NOVELTY - A **home gateway** acquires control bundle from a bundle management server, and stores it in a **RAM** . When **RAM** usage rate is beyond a preset value, the class, component and package contained in control bundle (A) and in prestored control bundle (B) are compared, based on which the class/component/package common to both bundles is designated as common class/common component/common package, for bundle integration.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) bundle reconfiguration method;

(2) **bundle** reconfiguration **program** .

USE - Bundle reconfiguration system comprising **home gateway** connected to personal computer, set top box (**STB**), personal digital assistant (PDA), mobile telephone, network card.

ADVANTAGE - The utilization effectiveness of **memory** is improved, and the burden on the gateway terminal accompanying reconfiguration of bundle is reduced.

DESCRIPTION OF DRAWING(S) - The figure shows an explanatory drawing of the control bundle. (Drawing includes non-English language text).

pp; 40 DwgNo 15/24

Title Terms: BUNDLE; RECONFIGURE; SYSTEM; COMPARE; CLASS; COMPONENT; PACKAGE; CONTAIN; BUNDLE; ACQUIRE; HOME; GATEWAY; BASED; CLASS; COMPONENT ; PACKAGE; COMMON; BUNDLE; DETERMINE; INTEGRATE; BUNDLE
Derwent Class: T01; W01
International Patent Class (Main): **G06F-009/54**
International Patent Class (Additional): **G06F-017/60**
File Segment: EPI

25/5/11 **(Item 11 from file: 350)**
DIALOG(R)File 350:Derwent WPIX

015972639 **Image available**
WPI Acc No: 2004-130480/200413
XRPX Acc No: N04-104019
Relational data structures access management method in distributed **computing environment, involves** associating **independent locks of relational data structures with local tree that allows access to relational data structure**
Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Inventor: CHAMPAGNE S R; MARTHI K N; UCEDA-SOSA R A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6681225	B1	20040120	US 2000584523	A	20000531	200413	B

Priority Applications (No Type Date): US 2000584523 A 20000531
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6681225	B1		18	G06F-007/00	

Abstract (Basic): US 6681225 B1
NOVELTY - The independent locks for the relational data structures of a global data **storage** , are obtained using a client **application** (1) including independent libraries. The independent locks are **associated** with at **least** one local tree that allows access to relational data structure using another client **application** (2).
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) relational data structures access management system; and
(2) relational data structures access management **program storage** device.
USE - Used for managing access to relational data structures in **distributed** computing environment e.g. client-client environments, client- **server** environments.
ADVANTAGE - Allows several clients to modify the global **tables** residing in one or **more** global repositories in a consistent, co-operative and efficient manner. Provides platform independent capability, as the operating system kernel extensions are not needed.
DESCRIPTION OF DRAWING(S) - The figure shows a graphical representation of using the select and merge functions within a lock block.
pp; 18 DwgNo 10/10
Title Terms: RELATED; DATA; STRUCTURE; ACCESS; MANAGEMENT; METHOD; **DISTRIBUTE** ; COMPUTATION; ENVIRONMENT; **ASSOCIATE** ; INDEPENDENT; LOCK; RELATED; DATA; STRUCTURE; LOCAL; TREE; ALLOW; ACCESS; RELATED; DATA; STRUCTURE
Derwent Class: T01
International Patent Class (Main): **G06F-007/00**
File Segment: EPI

25/5/22 **(Item 22 from file: 350)**
DIALOG(R)File 350:Derwent WPIX

012542729 **Image available**
WPI Acc No: 1999-348835/199930
XRPX Acc No: N99-260901

Serial bus controller for controlling and performing reservation of transmission bandwidth and transmission channel using IEEE 1394 serial bus

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI SANGYO KK (MATU)
Inventor: HAMAMOTO Y; TAKEDA H
Number of Countries: 027 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 921472	A2	19990609	EP 98122576	A	19981203	199930	B
JP 11168473	A	19990622	JP 97334326	A	19971204	199935	
US 6311243	B1	20011030	US 98203836	A	19981202	200172	

Priority Applications (No Type Date): JP 97334326 A 19971204
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 921472	A2	E	24	G06F-013/38	
JP 11168473	A		13	H04L-012/28	
US 6311243	B1			G06F-013/00	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

Abstract (Basic): EP 921472 A2

NOVELTY - The controller carries out reservation management of a serial bus by defining and using registers on CSR **space** for managing **reservations** of transmission bandwidth and transmission channel from present to future times.

DETAILED DESCRIPTION - A table is provided which controls a serial bus which has the function for securing a transmission bandwidth for a packet to the serial bus. The table is formed as a reservation control table and indicates a reservation of a transmission bandwidth and a transmission control channel which is required from T1 until time T2. The reservation control table is stored and controlled on a register assigned to an address space which is accessible for reading and writing from an arbitrary node on the serial bus.

USE - Controlling the use a bus, which can secure transmission bandwidth and transmission channel using IEEE 1394 serial bus over a secured time interval, when recording data e.g. digital data in a VCR. Making a reservation for recording from a **STB** to a VCR connected to a bus.

ADVANTAGE - Provides reservation management for future time using a serial bus for securing transmission bandwidth and transmission channel according to IEEE 1394 standard, and which is compatible with conventional systems.

DESCRIPTION OF DRAWING(S) - The drawing is a block diagram showing a serial bus control apparatus of an embodiment of the invention.

CPU (101)
System controller (102)
Timer (103)
Memory (104)
Serial bus controller (105)
pp; 24 DwgNo 1/115

Title Terms: SERIAL; BUS; CONTROL; CONTROL; PERFORMANCE; RESERVE; TRANSMISSION; BANDWIDTH; TRANSMISSION; CHANNEL; SERIAL; BUS
Derwent Class: T01; W03; W04
International Patent Class (Main): **G06F-013/00** ; **G06F-013/38** ; H04L-012/28
International Patent Class (Additional): G11B-015/02; G11B-020/10;

H04B-007/212; H04L-012/40; H04L-012/43
File Segment: EPI

25/5/26 (Item 26 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010565718 **Image available**
WPI Acc No: 1996-062671/199607
XRPX Acc No: N96-052467
Programming **support method for LAN environment - by monitoring system integration function management of collecting and managing schedule slippage of** server **machine through creation of customised part and** link table **module**
Patent Assignee: HITACHI LTD (HITA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 7319679	A	19951208	JP 94116207	A	19940530	199607	B

Priority Applications (No Type Date): JP 94116207 A 19940530
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7319679	A		5	G06F-009/06	

Abstract (Basic): JP 7319679 A
The method involves monitoring the system integration function management of collecting and managing the day to day schedule slippage of a given **server** machine (2) that is connected to a LAN (1). This is done by creating a customised part and **link table** of a module (4) which has the function of carrying out the selection support of the optimum **programming** part, in the development of a **program** specification.
The influence range **associated** with a **programming** part lipo (3) is clarified. This performs the **link** attachment of the **programming** part to the module. Finally, a process management **table** (5) which has the calendar function is given to the **server** machine in which the updating authority of a development machine (7a-7n) is **limited** only to a system administrator.
ADVANTAGE - Performs efficient interactive **programming** for two or **more** developers. Prevents version mismatching and schedule delay caused by connection leak or timing slippage in development return production, due to attachment of **programming** part lipo and module.
Dwg.1/6
Title Terms: **PROGRAM** ; SUPPORT; METHOD; LAN; ENVIRONMENT; MONITOR; SYSTEM; INTEGRATE; FUNCTION; MANAGEMENT; COLLECT; MANAGE; SCHEDULE; SLIP; SERVE; MACHINE; THROUGH; CREATION; CUSTOMISATION; PART; **LINK** ; **TABLE** ; MODULE
Index Terms/Additional Words: **LOCAL_A REA_ NETWO RKPro** ; AREA; NETWORK
Derwent Class: T01
International Patent Class (Main): **G06F-009/06**
File Segment: EPI

25/5/30 (Item 30 from file: 347)
DIALOG(R)File 347:JAPIO

08152336 **Image available**
SERVICE **LINKING** SYSTEM, SERVICE **LINKING** METHOD AND SERVICE **LINKING** **PROGRAM**

PUB. NO.: 2004-265096 [JP 2004265096 A]
PUBLISHED: September 24, 2004 (20040924)
INVENTOR(s): SUGIYAMA CHIKARA
SHIROKABE HIROMITSU
NANBA KOJI
APPLICANT(s): NIPPON TELEGRAPH & TELEPHONE WEST CORP
APPL. NO.: 2003-054212 [JP 200354212]

FILED: February 28, 2003 (20030228)
INTL CLASS: **G06F-013/00** ; **G06F-015/16**

ABSTRACT

PROBLEM TO BE SOLVED: To provide a service **linking** system, a service **linking** method and a service **linking** **program** capable of contributing to flexibly coping with changes of a system environment state and a service configuration and stable service provision even if a system environmental situation and the configuration of a service to be provided are changed on each computer system, in a computer system for providing various services for service users through a computer network.

SOLUTION: A **server** state management part 21 of the service **linking** system 2 periodically **calculates** **server** connection states and operation rates of **servers** of a **server** group 1 and leads **server** information which can provide a service with a certain **threshold** value. A service pattern management part 22 determines a providable service pattern from **server** connection information. A service generation part 23 generates a providable service to a service user terminal 4 from the **server** information of **server** operation rates which are equal to or larger than the **threshold** value and service-providable service patterns.

```
Set     Items   Description
S1       2869   OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
            JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR SMARTHOUSE OR HOME)-
            (N)(SERVER? OR ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR
            UPNP OR HOMERF OR HOME()RF
S2    3032983   MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM
S3     910195   ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4    1297794   DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5    1523347   SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
            DEMAND?
S6    1959754   FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7    2251950   GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
            MIT?
S8    1841234   EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
            LM?
S9    2050461   ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10        14   S1 AND S2(2N)S3
S11        15   S1 AND (S2 OR S3) AND S4(3N)S5
S12     34560   S2 AND S8 AND S9
S13         3   S1 AND S12
S14       100   S2 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8 AND S9
S15      6554   S4 AND S5 AND (S7 OR S8) AND S9
S16       163   S15 AND (GATEWAY? OR SERVER? OR ROUTER?)
S17        20   S4(3N)S5 AND S16
S18         7   S14 AND (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19        54   S10 OR S11 OR S13 OR S17 OR S18
S20     11154   MC=T01-F05E
S21         3   S19 AND S20
S22        35   S19 AND IC=G06F
S23        35   S21 OR S22
S24        35   IDPAT (sorted in duplicate/non-duplicate order)
S25        33   IDPAT (primary/non-duplicate records only)
S26        96   S1 AND S2(3N)(S3 OR MANAGE? OR CONTROL? OR ADMINIST?)
S27        16   S4 AND S26
S28        10   S27 NOT S19
S29        10   S28 AND IC=(G06F OR H04L)
S30        16   S26 AND S9
S31         9   S30 NOT (S27 OR S19)
S32         4   S31 AND IC=(G06F OR H04L)
File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)
         (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200527
         (c) 2005  Thomson Derwent
```

32/5/3 **(Item 1 from file: 350)**
DIALOG(R)File 350:Derwent WPIX

016411054 **Image available**
WPI Acc No: 2004-568966/200455
Home gateway **switch structure for ensuring QoS between different kinds of protocol**
Patent Assignee: KOREA ELECTRONIC TECHNOLOGY INST (KOEL-N)
Inventor: CHOI G S; JUNG G M
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
KR 2004033565	A	20040428	KR 200262704	A	20021015	200455	B

Priority Applications (No Type Date): KR 200262704 A 20021015
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
KR 2004033565	A		1	H04L-012/66	

Abstract (Basic): KR 2004033565 A
NOVELTY - A **home gateway** switch structure for ensuring QoS(Quality of Service) between different kinds of protocol is provided to guarantee QoS between respectively different protocols.
DETAILED DESCRIPTION - A packet processing part(100) encapsulates a common protocol header at the front end of a switching block in order to switch various packets of various protocols. A segmentation/Reassembly part(104) segments various protocol packets, supplied from the packet processing part(100) into many sub packets at a size of 256 bytes. A switching part(102) receives the 256-byte segmented packets, supplied from the segmentation/Reassembly part(104), through a bus controller(110), classifies the QoS of the received packets through a QoS/priority controller(114), and classifies the priority according to a priority **algorithm** . Then the switching part(102) stores the QoS/priority-classified packets respectively in a QoS buffer and a priority buffer, **allocated** to the first **memory** (120) in an external packet memory part(118), through a **memory controller** (112).
pp; 1 DwgNo 1/10
Title Terms: HOME; GATEWAY; SWITCH; STRUCTURE; ENSURE; KIND; PROTOCOL
Derwent Class: W01
International Patent Class (Main): **H04L-012/66**
File Segment: EPI

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Set     Items   Description
S1       2869   OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
            JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR SMARTHOUSE OR HOME)-
            (N)(SERVER? OR ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR
            UPNP OR HOMERF OR HOME()RF
S2    3032983   MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM
S3     910195   ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4    1297794   DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5    1523347   SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
            DEMAND?
S6    1959754   FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7    2251950   GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
            MIT?
S8    1841234   EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
            LM?
S9    2050461   ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10        14   S1 AND S2(2N)S3
S11        15   S1 AND (S2 OR S3) AND S4(3N)S5
S12     34560   S2 AND S8 AND S9
S13         3   S1 AND S12
S14       100   S2 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8 AND S9
S15      6554   S4 AND S5 AND (S7 OR S8) AND S9
S16       163   S15 AND (GATEWAY? OR SERVER? OR ROUTER?)
S17        20   S4(3N)S5 AND S16
S18         7   S14 AND (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19        54   S10 OR S11 OR S13 OR S17 OR S18
S20     11154   MC=T01-F05E
S21         3   S19 AND S20
S22        35   S19 AND IC=G06F
S23        35   S21 OR S22
S24        35   IDPAT (sorted in duplicate/non-duplicate order)
S25        33   IDPAT (primary/non-duplicate records only)
S26        96   S1 AND S2(3N)(S3 OR MANAGE? OR CONTROL? OR ADMINIST?)
S27        16   S4 AND S26
S28        10   S27 NOT S19
S29        10   S28 AND IC=(G06F OR H04L)
File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)
         (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200527
         (c) 2005  Thomson Derwent
```

29/5/2 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016885936 **Image available**
WPI Acc No: 2005-210220/200522
XRPX Acc No: N05-173539

Memory management **method for personal computer, involves enabling application programming interface to perform registration operation indicating portion of** memory **is to be** reserved **for use by virtual machine during program execution**

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Inventor: LAWRENCE K R; MATTHEWS G C

Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6862650	B1	20050301	US 97970417	A	19971114	200522	B

Priority Applications (No Type Date): US 97970417 A 19971114
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6862650	B1		13	G06F-012/02	

Abstract (Basic): US 6862650 B1

NOVELTY - The operation of Java virtual machine is initiated to selectively convert portion of software program to byte-code values that are stored in a **memory** . Page **manager** is enabled to selectively enable the memory to discard stored values. Application programming interface is enabled to perform registration operation indicating a memory portion is to be reserved for use by the machine during program execution.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) computer program product for managing memory; and

(2) data processing system.

USE - For managing memory in data processing system such as personal computer (PC), personal digital assistant (PDA), set-top-box (**STB**) and web television.

ADVANTAGE - The heap **associated** with the virtual machine is managed efficiently, thereby ensuring efficient and timely execution of applications implemented using Java programming language.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the data processing system.

pp; 13 DwgNo 6/6

Title Terms: MEMORY; MANAGEMENT; METHOD; PERSON; COMPUTER; ENABLE; APPLY; PROGRAM; INTERFACE; PERFORMANCE; REGISTER; OPERATE; INDICATE; PORTION; MEMORY; RESERVE; VIRTUAL; MACHINE; PROGRAM; EXECUTE
Derwent Class: T01
International Patent Class (Main): **G06F-012/02**
File Segment: EPI

```
Set     Items   Description
S1       6564   OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
            JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR SMARTHOUSE OR HOME)-
            (N)(SERVER? OR ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR
            UPNP OR HOMERF OR HOME()RF
S2     987100   MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM
S3     644250   ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4    1250447   DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5    2512617   SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
            DEMAND?
S6    1331568   FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7    1631899   GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
            MIT?
S8    1387089   EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
            LM?
S9     954717   ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10        60   S1 (10N) S2(2N)S3
S11        94   S1 (10N) (S2 OR S3) (12N) S4(3N)S5
S12     18094   S2 (12N) S8 (12N) S9
S13        16   S1 (12N) S12
S14      1266   S2 (S) S3 (S) S4 (S) S5 (S) S6 (S) S7 (S) S8 (S) S9
S15     10245   S4 (12N) S5 (12N) (S7 OR S8) (12N) S9
S16       370   S15 (10N) (GATEWAY? OR SERVER? OR ROUTER?)
S17       368   S4(3N)S5 (12N) S16
S18       263   S14 (13N) (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19       877   S1(3N)(MANAGE? OR CONTROL? OR ADMINIST? OR MONITOR?)
S20         4   S19(S)S14
S21         3   S10(S)S11
S22         2   S14(S)S16
S23         4   S18(S)S19
S24        47   S1(5N)S2(3N)S3
S25        53   S20:S24
S26        34   S25 AND IC=(G06F OR H04L)
S27        34   IDPAT (sorted in duplicate/non-duplicate order)
S28        34   IDPAT (primary/non-duplicate records only)
File 348:EUROPEAN PATENTS 1978-2005/Apr W04
         (c) 2005 European Patent Office
File 349:PCT FULLTEXT 1979-2005/UB=20050428,UT=20050421
         (c) 2005 WIPO/Univentio
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28/3,K/26 (Item 26 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00852798 **Image available**

BRIDGING BETWEEN A DATA REPRESENTATION LANGUAGE MESSAGE-BASED DISTRIBUTED COMPUTING ENVIRONMENT AND OTHER ENVIRONMENTS

LIAISON ENTRE UN ENVIRONNEMENT INFORMATIQUE DISTRIBUE BASE SUR LA MESSAGERIE EN LANGAGE DE REPRESENTATION DES DONNEES ET D'AUTRES ENVIRONNEMENTS

Patent Applicant/Assignee:
SUN MICROSYSTEMS INC, 901 San Antonio Road, Palo Alto, CA 94303, US, US (Residence), US (Nationality)
Inventor(s):
SLAUGHTER Gregory L, 3326 Emerson St., Palo Alto, CA 94306, US,
SAULPAUGH Thomas E, 6938 Bret Harte Dr., San Jose, CA 95120, US,
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ABDELAZIZ Mohamed M, 78 Cabot Ave., Santa Clara, CA 95051, US,
DUIGOU Michael J, 33928 Capulet Circle, Fremont, CA 94555, US,
Legal Representative:
KOWERT Robert C (agent), Conley, Rose & Tayon, P.C., P.O. Box 398, Austin, TX 78767-0398, US,

Patent and Priority Information (Country, Number, Date):
Patent: WO 200186422 A2-A3 20011115 (WO 0186422)
Application: WO 2001US15133 20010509 (PCT/WO US0115133)
Priority Application: US 2000202975 20000509; US 2000208011 20000526; US 2000209430 20000602; US 2000209140 20000602; US 2000209525 20000605; US 2000693672 20001019
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 76340

Main International Patent Class: **G06F-009/46**
International Patent Class: **H04L-029/06**
Fulltext Availability:
Detailed Description

Detailed Description
... is based on an RMI layer 14 over a TCP/IP capable networking layer 16.

Jini is a promising technology for simplifying **distributed** computing. However, for certain types of devices, **Jini** may not be. appropriate. The computing landscape is moving toward a distributed, Web-centric service...analyzed. Thus, Java serialization/deserialization is slow and cumbersome while also requiring large amounts of **application** and, NM code as well as persistent **storage space** .

Even for dun clients that do support Java, the **Jini** RMI may not be practical for thin. clients with minirnal mernory f~prints and, minimal bandwidlh. The serialization **associated** with the **Jini** RMI is slow, big, requires the JVM reflection API, and is a Java specific object...In one embodiment, a connector mechanism may be defined that enables the dynarnic advertisement of **Jini** services in **distributed** computing

enviromnent **spaces** , and that also may enable the accessing of a Jini service proxy from. clients in...

...When informed of a new Jini service, the agent may perform a lookup in Jini **spaces** to locate newly advertised **Jini** services and to update the **distributed** computing environment **space** with new XIVM advertisements for the new services. In one embodiment, when a Jini service...Tfie distributed computing enviromnent client proxy 1904 may advertise RMI-based enviromnent 1902 (e.g. **Jini**) services 1906 in **spaces** 1908 in the **distributed** computing envirom-nent 1900. In one embodiment, the choice of which services 1906 to advertise...

28/3,K/28 (Item 28 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00852796 **Image available**
MECHANISM AND APPARATUS FOR ACCESSING AND ADDRESSING SERVICES IN A DISTRIBUTED COMPUTING ENVIRONMENT
MECANISME ET APPAREIL D'ACCES ET D'ADRESSAGE DE SERVICES DANS UN ENVIRONNEMENT INFORMATIQUE REPARTI

Patent Applicant/Assignee:
SUN MICROSYSTEMS INC, 901 San Antonio Road, Palo Alto, CA 94303, US, US (Residence), US (Nationality)
Inventor(s):
SLAUGHTER Gregory L, 3326 Emerson Street, Palo Alto, CA 94306, US,
SAULPAUGH Thomas E, 6938 Bret Harte Drive, San Jose, CA 95120, US,
TRAVERSAT Bernard A, 2055 California Street, Apt. 402, San Francisco, CA 94109, US,
ABDELAZIZ Mohamed M, 78 Cabot Avenue, Santa Clara, CA 95051, US,
Legal Representative:
KOWERT Robert C (agent), Conley, Rose & Tayon, P.C., P.O. Box 398, Austin, TX 78767-0398, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200186420 A2-A3 20011115 (WO 0186420)
Application: WO 2001US15044 20010509 (PCT/WO US0115044)
Priority Application: US 2000202975 20000509; US 2000208011 20000526; US 2000209430 20000602; US 2000209140 20000602; US 2000209525 20000605; US 2000660563 20000912
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 65191

Main International Patent Class: **G06F-009/46**
International Patent Class: **G06F-017/30**
Fulltext Availability:
Detailed Description
Detailed Description
... In one embodiment, a connector mechanism may be defined that enables the dynarnic advertisement of **Jini** services in **distributed** computing environment **spaces** , and that also may enable the accessing of a Jini service proxy from clients in...

...When informed of a new Jini service, the agent may perform a lookup in Jini **spaces** to locate newly advertised **Jini** services and to update the **distributed** computing environment **space** with r(inverted question mark)ew XMI, advertisernents for the new services. In one embodiment...

28/3,K/33 (Item 33 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00801757 **Image available**
A DECISION BASED SYSTEM FOR MANAGING DISTRIBUTED RESOURCES AND MODELING THE GLOBAL OPTIMIZATION PROBLEM
SYSTEME DECISIONNEL DE GESTION DE RESSOURCES DISTRIBUEES ET DE MODELISATION D'UN PROBLEME D'OPTIMISATION GLOBALE

Patent Applicant/Inventor:
FAKHOURI Sameh A, 143 Storer Avenue, New Rochelle, NY 10801, US, US (Residence), US (Nationality)
JEROME William F, 4 Noel Court, Anawalk, NY 10501, US, US (Residence), US (Nationality)
KUMMAMURU Krishna, 86/4 Opp NCC Office, Safdariung Enclave, New Delhi 110016, IN, IN (Residence), IN (Nationality)
NAIK Vijay E, 48 Iroquois Road, Pleasantville, NY 10570, US, US (Residence), IN (Nationality)
PERSHING John A Jr, 162 Cortlandt Street, Buchanan, NY 10511, US, US (Residence), US (Nationality)
RAINA Ajay, 131-B, Uttam Nagar, Kuniwani, Jammu-J & K-180010, IN, IN (Residence), IN (Nationality)
VARMA Pradeep, 10 West Avenue, IIT Campus, Hauz Khas, New Delhi 110016, IN, IN (Residence), IN (Nationality)
BADOVINATZ Peter, 13740 SW 27th Court, Beaverton, OR 97008, US, US (Residence), US (Nationality)
KUMAR Ajay, New Orchard Road, Armonk, NY 10504, US, US (Residence), IN (Nationality)
Legal Representative:
DIGIGLIO Frank S (et al) (agent), Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY 11530, US,

Patent and Priority Information (Country, Number, Date):
Patent: WO 200135278 A1 20010517 (WO 0135278)
Application: WO 2000US30913 20001110 (PCT/WO US0030913)
Priority Application: US 99164527 19991110; US 2000197036 20000413
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 23454

Main International Patent Class: **G06F-017/30**
Fulltext Availability:
Claims

Claim
... allows S-contained supports for a TLR in S to be partitioned such that no **dependency** edge inbetween resources comprising the TLR and the supports crosses a partition boundary.
3 7...

...resource group is a proxy TLR that I 0 is constructed as a resource that **depends** on the TLRs contained in S. Strictly speaking, after this construction, the TLRs of S...

...equiv alency of the leaf-level proxies is made. The proxy TLR is defined

to **depend** on the equivalency, and also to be collocated with the choice from the equivalency. For...

...of the group is Offline. The CMFstate of a proxy TLR represents CMF for the **associated** resource group.
CMFstate up represents CMF = Online and CMFstate down represents CMF Offline. CMFstate dead...

...multiple nominalI 0 state-change events. This is followed by the usual reevaluation of the **allocations** for the island. Whenever an island containing an Online resource group is evaluated, special attention...in an RG fails to come up. Auxiliary solutions for gossamer up command failures are **limited** in resource groups by the collocation requirement of resource groups. Screening for collocation is done...

...for the same. When the event handler gets a graph event, it quickly identifies the **minimal** set of 1 5 islands that are affected by the event. The event handler leaves...

...queue that have not been blocked, and that affect any island in the above identified **minimal** set of islands. The **minimal** set of islands can expand each time another event is collected, and this increase can make **more** events become eligible to join the collection. Thus the **minimal** set of islands and collection of events increase recursively.'Regardless of clubbing, the identities of...This can lead to a new set of islands in place of the old set **associated** I 0 with the clubbed event. The input queue of the event handler is then...

...a clubbed event's shutdown. Instead, the special shutdown event should only bring down a **minimal** number of resources
43
needed for changing the problem graph - e.g. bring down only...

...suited to meet these requirements. A concurrent specification is naturally suited to Mounties and is **more** likely to yield a verifiably correct and robust implementation of the system. A simple and...

...in a pipelined manner. Such a specification however can suffer from two problems: (a) complexities **associated** with managing parallelism including state sharing and synchronization, and (b) inefficiency of fine-grained parallelism...

...cloned copies of the repository; flexibility and amenability to changes in functionality (e.cr., adding **more** Preprocessor smarts).
44
Efficient and Flexible Concurrent Programming
The paradi gm comprises of an approach...
...relatively short lived, dynamic, concurrent tasks wherein the tasks can be in-lined. In the **limit** of this approach. all of the tasks can be in-lined, resulting in a sequential...

...as follows. Each event from the event handler results in the creation of one or **more** tasks, to be picked by the one or **more** threads implementing Mounties, The tasks wait in an appropriate queue prior to being picked. In...

...to completion, without switching to another task. The task execution can result in one or **more** new tasks getting created, ...In this programming paradigrn, computation and communication are merged. Generally a task is a procedure **call** , with its arguments representing the communicated, inter-process, channel data from the CSP model. In general intermodule communication is carried out by task queues connecting the modules, wherein, the **scheduler** is given the charge of executing a task for a module by causing a thread...

...5 safety is guaranteed. The accompanying complexity of lock management and synchronization is straightforward. The **scheduling** of threads itself is done in a manner that avoids looping over input. Whenever a...

...art: IBM's HA/CMP, Nficrosoft's MSCS, Tivoli's AMS system, and Sun's **Jini** technology.

46

Application management middleware has traditionally been used for products that provide high availability such as IBM's HAICMP and Microsoft's Cluster Services (NISCS). HA/CMP's **application** management requires cluster resource configuration. Custom recovery scripts that are **programmed** separately for each cluster installation are needed. Making changes to the recovery scheme or to basic set of resource in the cluster requires these scripts to be re- **programmed** . Finally, HA/CMP recovery programs are stored and executed synchronously on all nodes of the cluster. MSCS provides a GUI-driven **application** manager across a two-node cluster with a single shared resource: a shared disk [see...

...and resource management is simplified with MSCS: there is only one resource to manage with **limited** management capabilities.

1 5

Tivoli offers an **Application** Management Specification (AMS) mechanism, which provides an ability to define and configure **applications** using the- Tivoli **Application** Response Measurement (ARM) API layer [see, Tivoli Corp., Tivoli and **Application** Management, htti):://www.tivole.com/products/documents/whiteoapersibodv -maT) --wr).html, 1999]. These **applications** are referred to as instrumented **applications** . The information gathered from the instrumented **applications** can be used to drive scripts by channeling the information through the Tivoli Event Console (TEC). The TEC can be configured to respond to specific **application** notification and initiate subsequent actions upon apRlication feedback. The current version of ARM **application** monitoring is from a single system's perspective. Future versions may include correlating events arrion...

...of these include Tspaces [see, P. Wyckoff, S. McLaughry, TI Lehman, and D. Ford, T **Spaces** , IBM Systems Journal, pp. 454-474,

47

vol. 37, 1998] and the **Jini** Technology [see, K. Edwards, Core JINI, The Sun Microsystems Press Java Series, 1999]. The TSpaces...

...can be used by other higher level services to manacre and coordinate resources in a **distributed** environment. **Jini** , on the other hand is a collection of services for dynamically acquiring and relinquishing services...

...mechanisms in Mounties do overlap in functionality with the similar services provided in TSpaces and **Jini** . Finally, there are several resource management systems for **distributed** environments with decision-making capabilities. Darwin is an example of such a system that performs resource **allocations** taking into account **application** requirements [see, P. 1 5 Chandra, A. Fisher, C. Kosak, E. Ng, P. Steenkiste, E...

...between Darwin and Mounties, Mounties provides a much richer set of abstractions for expressing complex **dependency** information among resources. Also, the Mounties system is geared towards optimizing the **allocation** of services such that overall objectives are met; in Darwin the goal seems to be **more** geared towards optimizing the req uirements of an **application** or of a service. The Mounties services described here have some similarities with the Workj7ow ...for global cluster startup, resource failure and recovery, guarantees for quality-of-service, load-balance, **application** farm management, plugand-configure style of management for the cluster resources, and so on. The...

...modularity allows for substitution, at run-time, by alternate services including alternate decision making components. **Moreover** , the I 0 system is flexible enough to operate in a full auto pilot mode...

...changes in the system. Finally, it should be noted that the decision making capabilities and **associated** support services are general enough to be applied in other scenarios including in environments that are much **more** loosely coupled than clusters and that are highly **distributed** such those encountered in mobile and pervasive computing environments. In such environments, multiple independent decision...

...approach for on-line modeling and solution o f the global optimization problem using Evolutionary **algorithms** . These problems arise in the managing **distributed** resource using the decision support apparatus described earlier.

50

This aspect of the invention relates to the filed of **distributed** computing, and **more** particularly, to **allocation** various resource in the **distributed** computing environment. The resources need to be **allocated** to their **dependent** resources such that a gc@veri criterion is optimized.

Background

In a mission-critical semiautonomous...

...presence of unavailability of a subset of resources. Typically in complex systems, end user services **depend** oil multiple, lower level services and these in turn may **depend** on other lower level services. For example, web **servers** **depend** on database **servers** which in turn **depend** on lower level services such as 1/0 services, communication services, and even lower level services provided by the OS and the CPU. Together, these inter **dependencies** form a (directed acyclic)

de

'pendency or constraint garaph (CG) (refer Figure 1), where the vertices correspond to the individual services and the edge correspond to the **dependency** relationships. For a variety of reasons, complex systems invariably consist-of redundant services, that provide similar functionality. This results in resource **dependency** graphs with multiple choices in **allocating** a particular type of supporting resource or service. We refer to these multiple choices as...

...providing multiple choices for a particular type of service. Similarly, a service may appear in **more** than

5 1

one equivalency. Furthermore, multiple higher level

services

```
Set     Items   Description
S1      45744   OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
             JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR HOME)(N)(SERVER? OR
             ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR UPNP OR HOMERF
             OR SMARTHOUSE OR HOME()RF OR NETWORKED(3N)INTERNET()APPLIANCES
S2   13085894   MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM OR SDRAM
              OR RESOURCE?
S3     404938   S2(3N)(ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SC-
             HEDUL?)
S4     469151   (DEPEND? OR ASSOCIAT? OR LINK? OR BUNDL?)(3N)(SERVICE()INS-
             TANCE? OR PROGRAM? OR APPLICATION? OR CALL OR DEMAND?)
S5       1224   S4(5N)(FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST)
S6      24044   S4(5N)(GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK?
              OR LIMIT?)
S7     581301   S2(3N)(EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR -
             OVERWHELM?)
S8      19005   S3(S)(ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MAT-
             RIX?)
S9       2503   S1(3N)(MANAGE? OR CONTROL? OR ADMINIST? OR MONITOR?)
S10     19088   S3(S)(S5 OR S6 OR S7)
S11       118   S8(S)(S4 OR S5)
S12         4   S3(10N)(S5 OR S6 OR S7)(10N)S1
S13         0   S11(S)S1
S14         8   S9(S)S3
S15         3   S10(10N)S1
S16         4   S1(10N)S3(10N)(S5 OR S6 OR S7)
S17        54   S1(10N)S3
S18         8   S12 OR S12 OR S14 OR S15 OR S16
S19        58   S17 OR S18
S20        30   RD (unique items)
S21        25   S20 NOT PY>2002
S22        25   S21 NOT PD>20021201
File 275:Gale Group Computer DB(TM) 1983-2005/May 05
         (c) 2005 The Gale Group
File  47:Gale Group Magazine DB(TM) 1959-2005/May 05
         (c) 2005 The Gale group
File  75:TGG Management Contents(R) 86-2005/Apr W4
         (c) 2005 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2005/May 05
         (c) 2005 The Gale Group
File  16:Gale Group PROMT(R) 1990-2005/May 04
         (c) 2005 The Gale Group
File 624:McGraw-Hill Publications 1985-2005/May 04
         (c) 2005 McGraw-Hill Co. Inc
File 484:Periodical Abs Plustext 1986-2005/May W1
         (c) 2005 ProQuest
File 613:PR Newswire 1999-2005/May 05
         (c) 2005 PR Newswire Association Inc
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 141:Readers Guide 1983-2005/Dec
         (c) 2005 The HW Wilson Co
File 239:Mathsci 1940-2005/Jun
         (c) 2005 American Mathematical Society
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
File 696:DIALOG Telecom. Newsletters 1995-2005/May 04
         (c) 2005 The Dialog Corp.
File 553:Wilson Bus. Abs. FullText 1982-2004/Dec
         (c) 2005 The HW Wilson Co
File 621:Gale Group New Prod.Annou.(R) 1985-2005/May 05
         (c) 2005 The Gale Group
File 674:Computer News Fulltext 1989-2005/May W1
         (c) 2005 IDG Communications
```

File 88:Gale Group Business A.R.T.S. 1976-2005/May 04
         (c) 2005 The Gale Group
File 369:New Scientist 1994-2005/Apr W1
         (c) 2005 Reed Business Information Ltd.
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 635:Business Dateline(R) 1985-2005/May 03
         (c) 2005 ProQuest Info&Learning
File 15:ABI/Inform(R) 1971-2005/May 04
         (c) 2005 ProQuest Info&Learning
File   9:Business & Industry(R) Jul/1994-2005/Apr 28
         (c) 2005 The Gale Group
File 13:BAMP 2005/Apr W4
         (c) 2005 The Gale Group
File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
File 610:Business Wire 1999-2005/May 05
         (c) 2005 Business Wire.
File 647:CMP Computer Fulltext 1988-2005/Apr W3
         (c) 2005 CMP Media, LLC
File 98:General Sci Abs/Full-Text 1984-2004/Dec
         (c) 2005 The HW Wilson Co.
File 148:Gale Group Trade & Industry DB 1976-2005/May 05
         (c)2005 The Gale Group
File 634:San Jose Mercury Jun 1985-2005/May 04
         (c) 2005 San Jose Mercury News

22/3,K/9 **(Item 4 from file: 16)**
DIALOG(R)File 16:Gale Group PROMT(R)

06175036 Supplier Number: 54034997 (USE FORMAT 7 FOR FULLTEXT)
Sun Promises Easier Networking.(Technology Information)
Karpinski, Richard
InformationWeek, p36(1)
Feb 1, 1999
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 230

... Associates and ObjectSpace are building application environments that make use of a key concept in **Jini** : **distributed** virtual **memory spaces** , where objects are stored and accessed as services by devices and other objects.
"The Jini...

22/3,K/22 **(Item 1 from file: 647)**
DIALOG(R)File 647:CMP Computer Fulltext

01231892 CMP ACCESSION NUMBER: EET20010219S0079
FPGAs don remote reprogram habits
Login Harris, Contract Engineer, David Atkisson, Senior Software Engineer, emWare Inc., Salt Lake City, Utah
ELECTRONIC ENGINEERING TIMES, 2001, n 1154, PG100
PUBLICATION DATE: 010219
JOURNAL CODE: EET LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: EMBEDDED SYSTEMS - FOCUS: PROGRAMMABLE LOGIC
WORD COUNT: 1211

... they can be interoperable with device object networking strategies such as Universal Plug and Play, **Jini** and **OSGi** . And device **resources** can be **distributed** to the gateway by taking over device file system management, server capabilities, common object proxies...

```
Set     Items   Description
S1       4291   OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
            JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR HOME)(N)(SERVER? OR
            ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR UPNP OR HOMERF
            OR SMARTHOUSE OR HOME()RF OR NETWORKED(3N)INTERNET()APPLIANCES
S2    4616199   MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM OR SDRAM
           OR RESOURCE?
S3    6145531   ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SCHEDUL?
S4    8731986   DEPEND? OR ASSOCIAT? OR LINK? OR BUNDLE?
S5    8429049   SERVICE()INSTANCE? OR PROGRAM? OR APPLICATION? OR CALL OR -
           DEMAND?
S6    1621141   FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST
S7    9712823   GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK? OR LI-
           MIT?
S8    5348940   EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR OVERWHE-
           LM?
S9    7517861   ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MATRIX?
S10        89   S1 AND S2(2N)S3
S11         4   S1  AND (S2 OR S3)  AND S4(3N)S5
S12    128385   S2  AND S8  AND S9
S13        17   S1  AND S12
S14       101   S2 (S) S3 (S) S4 (S) S5 (S) S6 (S) S7 (S) S8 (S) S9
S15     89105   S4  AND S5  AND (S7 OR S8)  AND S9
S16      1319   S15  AND (GATEWAY? OR SERVER? OR ROUTER?)
S17       117   S4(3N)S5  AND S16
S18         4   S14  AND (S1 OR GATEWAY? OR SERVER? OR ROUTER?)
S19       192   S1(3N)(MANAGE? OR CONTROL? OR ADMINIST? OR MONITOR?)
S20         0   S19 AND S14
S21         1   S10 AND S11
S22         4   S14 AND S16
S23         0   S18 AND S19
S24        18   S1(5N)S2(3N)S3
S25        74   S10 AND (S4 OR S5 OR S6 OR S7 OR S8)
S26        23   S10 AND S9
S27    866689   (S6 OR S7 OR S8) AND (S4 OR S5) AND S9
S28         7   S10 AND S27
S29        55   S11 OR S13 OR S18 OR S21 OR S22 OR S24 OR S26 OR S28
S30         6   S19 AND S10
S31        58   S29 OR S30
S32        44   RD (unique items)
S33        27   S32 NOT PY>2002
File   8:Ei Compendex(R) 1970-2005/Apr W4
         (c) 2005 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2005/Mar
         (c) 2005 ProQuest Info&Learning
File  65:Inside Conferences 1993-2005/May W1
         (c) 2005 BLDSC all rts. reserv.
File   2:INSPEC 1969-2005/Apr W4
         (c) 2005 Institution of Electrical Engineers
File  94:JICST-EPlus 1985-2005/Mar W3
         (c)2005 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2005/May 03
         (c) 2005 The Gale Group
File   6:NTIS 1964-2005/Apr W4
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
File 144:Pascal 1973-2005/Apr W4
         (c) 2005 INIST/CNRS
File  34:SciSearch(R) Cited Ref Sci 1990-2005/Apr W4
         (c) 2005 Inst for Sci Info
File  99:Wilson Appl. Sci & Tech Abs 1983-2005/Apr
         (c) 2005 The HW Wilson Co.
File  95:TEME-Technology & Management 1989-2005/Mar W4
         (c) 2005 FIZ TECHNIK
```

33/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

07071779 E.I. No: EIP04438416233
Title: Design of a new chip architecture for a home gateway
Author: Choi, Kwang-Soon; Jung, Kwang-Mo; Yoon, Myung-Hyun
Corporate Source: High Speed Network Research Center Korea Electron. Technology Institute, Seongnam-Si, Kyunggi-Do, 463-771, South Korea
Source: Advances in Communications and Software Technologies Advances in Communications and Software Technologies 2002. p 83-88
Publication Year: 2002
ISBN: 9608052718
Language: English
Document Type: JA; (Journal Article) Treatment: T; (Theoretical)
Journal Announcement: 0410W4
Abstract: As Internet is becoming popular to everyone recently, demands for higher-quality services such as VOD and home networking have been increasing. Especially, home networking system can interconnect and control home appliances which use different protocols via Internet. This means that a common protocol to communicate with each other and a new system architecture to implement the common protocol are needed. In this paper, we propose a common protocol and a novel chip architecture with a memory **management** scheme for a **home gateway** system. 9 Refs.
Descriptors: *Gateways (computer networks); Microprocessor chips; Computer architecture; Quality of service; Network protocols; **Storage allocation** (computer); Internet; Modems; Data transfer; Local area networks; Packet networks; Scheduling; **Algorithms**
Identifiers: Common protocols; Packet conversion; **Home gateway** ; **Home** network; Shared memory
Classification Codes:
714.2 (Semiconductor Devices & Integrated Circuits); 722.1 (Data Storage, Equipment & Techniques); 718.1 (Telephone Systems & Equipment); 723.2 (Data Processing); 912.2 (Management)
716 (Electronic Equipment, Radar, Radio & Television); 714 (Electronic Components & Tubes); 722 (Computer Hardware); 723 (Computer Software, Data Handling & Applications); 718 (Telephone & Other Line Communications) ; 912 (Industrial Engineering & Management)
71 (ELECTRONICS & COMMUNICATION ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 91 (ENGINEERING MANAGEMENT)

33/5/2 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

06238732 E.I. No: EIP02517277844
Title: ICENI: Optimisation of component applications within a Grid environment
Author: Furmento, Nathalie; Mayer, Anthony; McGough, Stephen; Newhouse, Steven; Field, Tony; Darlington, John
Corporate Source: London e-Science Centre Imp. Coll. of Sci., Technology/Med., London SW7 2BZ, United Kingdom
Source: Parallel Computing v 28 n 12 December 2002. p 1753-1772
Publication Year: 2002
CODEN: PACOEJ ISSN: 0167-8191
Language: English
Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)
Journal Announcement: 0212W4
Abstract: Effective exploitation of Computational Grids can only be achieved when applications are fully integrated with the Grid middleware and the underlying computational resources. Fundamental to this exploitation is information. Information about the structure and behaviour of the application, the capability of the computational and networking resources, and the availability and access to these resources by an individual, a group or an organisation. In this paper we describe Imperial College e-Science Networked Infrastructure (ICENI), a Grid middleware framework developed within the London e-Science Centre. ICENI is a platform-independent framework that uses open and extensible XML derived protocols, within a framework built using Java and **Jini** , to explore effective application execution upon **distributed** federated **resources** . We match a high-level application specification, defined as a network of components, to an optimal combination of the currently available component implementations within our Grid environment, by using composite performance models. We demonstrate the effectiveness of this architecture through the high-level specification and solution of a set of linear equations by automatic and selection of optimal resources and implementations. copy 2002 Elsevier Science B.V. All rights reserved. 31 Refs.
Descriptors: *Computer architecture; Middleware; Network protocols; XML; Distributed computer systems; Java programming language; Linear equations
Identifiers: Computational grids
Classification Codes:
723.1.1 (Computer Programming Languages)
723.1 (Computer Programming); 722.4 (Digital Computers & Systems)
722 (Computer Hardware); 723 (Computer Software, Data Handling & Applications); 921 (Applied Mathematics)
72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

33/5/6 **(Item 6 from file: 8)**
DIALOG(R)File 8:Ei Compendex(R)

05423344 E.I. No: EIP99114893980
Title: Home network file system for home network based on IEEE-1394 technology
Author: Igarashi, Tatsuya; Hayakawa, Koichi; Nishimura, Takuya; Ozawa, Takeshi; Takizuka, Hiroshi
Corporate Source: Sony Corp, Tokyo, Jpn
Conference Title: Proceedings of the 1999 IEEE International Conference on Consumer Electronics, ICCE'99
Conference Location: Los Angeles, CA, USA Conference Date: 19990622-19990624
E.I. Conference No.: 55511
Source: Digest of Technical Papers - IEEE International Conference on Consumer Electronics 1999. p 150-151
Publication Year: 1999
CODEN: DTPEEL ISSN: 0747-668X
Language: English
Document Type: JA; (Journal Article) Treatment: A; (Applications)
Journal Announcement: 0001W2
Abstract: This paper proposes a network file system for home network based on IEEE-1394 technology. Home Network File System enables real-time playback, recording of audio/video file and file sharing for **HAVi** (**Home Audio Video** interoperability) compliant consumer devices. (Author abstract) 3 Refs.
Descriptors: *Computer networks; Real time systems; Asynchronous transfer mode; Data transfer; Bandwidth; Image compression; Image coding; **Resource allocation** ; **Calculations**
Identifiers: Home network file system; **Home audio video** interoperability; File **management** ; File sharing
Classification Codes:
722.4 (Digital Computers & Systems); 723.2 (Data Processing); 921.6 (Numerical Methods)
722 (Computer Hardware); 723 (Computer Software); 921 (Applied Mathematics)
72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

33/5/8 (Item 8 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04986869 E.I. No: EIP98044152211
Title: Television home server **for integrated services - toward the realization of ISDB `anytime' services**
Author: Kurioka, Tatsuya; Minami, Hiroki; Okuda, Haruo; Numazawa, Junji; Yanagimachi, Akio; Ohshima, Hideo
Corporate Source: NHK Science and Technical Research Lab, Tokyo, Jpn
Conference Title: Proceedings of the 1997 IEEE International Symposium on Consumer Electronics, ISCE'97
Conference Location: Singapore, Singapore Conference Date: 19971202-19971204
Sponsor: IEEE
E.I. Conference No.: 48204
Source: Proceedings of the IEEE International Symposium on Consumer Electronics, ISCE 1997. IEEE, Piscataway, NJ, USA,97TH8348. p 250-253
Publication Year: 1997
CODEN: 002828
Language: English
Document Type: CA; (Conference Article) Treatment: G; (General Review)
Journal Announcement: 9805W4
Abstract: In the age of digital multimedia, demand is bound to rise for a television **Home Server** for integrated services which automatically records favorite programs so that users can watch them anytime. We have developed a hierarchical storage management system (HSMS) as the architecture for the development of a high-speed **Home Server** with very large capacity. This paper first describes the required specifications and memory constructions of the **Home Server** and then proposes a model of new HSMS. Also described is its element technologies and an experimental **Home Server** system, and the results of the experiment we conducted to test its performance. (Author abstract) 3 Refs.
Descriptors: *Voice/data communication systems; Television broadcasting; Hierarchical systems; **Storage allocation** (computer); Computer architecture
Identifiers: Hierarchical storage **management** system (HSMS); Television **home server** ; Integrated services digital broadcasting (ISDB)
Classification Codes:
716.3 (Radio Systems & Equipment); 722.1 (Data Storage, Equipment & Techniques); 716.4 (Television Systems & Equipment)
716 (Radar, Radio & TV Electronic Equipment); 722 (Computer Hardware); 723 (Computer Software)
71 (ELECTRONICS & COMMUNICATIONS); 72 (COMPUTERS & DATA PROCESSING)

33/5/11 (Item 2 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01778917 ORDER NO: AADAA-I9993079
A cost-benefit approach to resource allocation in scalable metacomputers
Author: Borgstrom, R. Sean
Degree: Ph.D.
Year: 2001
Corporate Source/Institution: The Johns Hopkins University (0098)
Supervisor: Yair Amir
Source: VOLUME 61/10-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 5401. 120 PAGES
Descriptors: COMPUTER SCIENCE
Descriptor Codes: 0984
ISBN: 0-493-00383-5

A <italic>metacomputer</italic> is a set of machines networked together for increased computational performance. To build an efficient metacomputer, one must assign jobs to the various networked machines intelligently. A poor job assignment strategy can result in heavily unbalanced loads and thrashing machines. This cripples the cluster's computational power. A strong job assignment strategy helps a metacomputer complete all of its jobs swiftly.

Resource heterogeneity makes job assignment **more** complex. Placing a job on one machine might risk depleting its small **memory** . Another machine might have **more** free **memory** but a heavily burdened CPU. <italic>Bin packing</italic> on **memory** protects the system against thrashing. <italic>Load balancing</italic> protects the system against high CPU loads. Combining the two approaches, however, gives an <italic>ad hoc</italic> heuristic **algorithm** with no clear theoretical merit.

The <bold>Cost-Benefit Framework</bold>, developed in this work, offers a new approach to job assignment on metacomputers. It smoothly handles heterogeneous **resources** by converting them into a unitless cost. We assign (and possibly reassign) jobs to greedily minimize this cost.

This approach gives us an online strategy provably competitive with the optimal offline **algorithm** in the maximum usage of each **resource** . It has a weak competitive ratio—logarithmic in the number of machines in the cluster—but even this weak ratio is unprecedented in the literature. No other known method offers any competitive guarantee on **more** than one **resource** .

We present experimental evidence that this strategy performs extremely well in practice, comparing it to two important benchmarks: the default round robin strategy of the popular PVM metacomputing system, and the powerful adaptive strategy of the Mosix system.

Metacomputing environments are not homogeneous. In some environments, the scheduler has a great deal of information about submitted jobs. In other cases, it has very little. Some systems can migrate jobs without interrupting their execution. Others cannot. We develop variants of the basic "opportunity cost" strategy of the Cost-Benefit Framework for various metacomputing environments, and prove all of them highly efficient.

Finally, we provide two metacomputing systems—a prototype and a complete system—based on these ideas. The Java Market prototype is a metacomputer built atop Java and web technologies, able to integrate any consenting Internet-connected machine. The Frugal System transforms any **Jini** network into a metacomputer.

```
Set     Items   Description
S1         92   OSGI OR OPEN()STANDARD()GATEWAY? OR HOME()AUDIO()VIDEO OR -
               JAVA()NAMING(N)DIRECTOR? OR (HOUSEHOLD OR HOME)(N)(SERVER? OR
               ROUTER? OR GATEWAY?) OR STB OR JINI OR HAVI OR UPNP OR HOMERF
               OR SMARTHOUSE OR HOME()RF OR NETWORKED(3N)INTERNET()APPLIANCES
S2      13079   MEMOR? OR SPACE? OR STORAGE? OR RAM OR SRAM OR ROM OR SDRAM
              OR RESOURCE?
S3        524   S2(3N)(ALLOCAT? OR DISBURS? OR DISTRIBUT? OR RESERV? OR SC-
               HEDUL?)
S4        819   (DEPEND? OR ASSOCIAT? OR LINK? OR BUNDL?)(3N)(SERVICE()INS-
               TANCE? OR PROGRAM? OR APPLICATION? OR CALL OR DEMAND?)
S5          0   S4(5N)(FEWEST OR LOWEST OR MINIMAL OR SMALLEST OR LEAST)
S6         39   S4(5N)(GREATEST OR MOST OR MORE OR THRESHOLD? OR BENCHMARK?
              OR LIMIT?)
S7        467   S2(3N)(EXCEED? OR MORE? OR TOO()MUCH? OR OVERSUBSCRIB? OR -
               OVERWHELM?)
S8         38   S3(S)(ALGORITHM? OR FORMULA? OR TABLE? OR CALCULAT? OR MAT-
               RIX?)
S9          5   S1(3N)(MANAGE? OR CONTROL? OR ADMINIST? OR MONITOR?)
S10        11   S2 AND S3 AND S4
S11        16   S9 OR S10
S12         0   S8 AND S1
S13        16   S11 NOT PY>2002
File 256:TecInfoSource 82-2005/Mar
         (c) 2005 Info.Sources Inc
```

13/3,K/2
DIALOG(R)File 256:TecInfoSource

01103322 DOCUMENT TYPE: Product

PRODUCT NAME: ILOG CPLEX (103322)

ILOG Inc (546291)
1080 Linda Vista Ave
Mountain View, CA 94043 United States
TELEPHONE: (650) 567-8000

RECORD TYPE: Directory

CONTACT: Sales Department

REVISION DATE: 20030617

...ILOG CPLEX is a mathematical programming optimizer that solves linear, mixed integer, and quadratic problems **associated** with **resource allocation applications** . The product can help streamline supply chain planning, telecommunication network design, and transportation system design...

13/3,K/5
DIALOG(R)File 256:TecInfoSource

00149838 DOCUMENT TYPE: Review

PRODUCT NAMES: Microsoft Automated Deployment Services (183474)

TITLE: Utility computing plans take shape: Microsoft begins to flesh out....
AUTHOR: Fontana, John
SOURCE: Network World, v20 n36 p1(2) Sep 8, 2003
ISSN: 0887-7661
HOMEPAGE: http://www.nwfusion.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

REVISION DATE: 20040130

...elaborate strategies for creating management environments that allow systems to adapt to changes via dynamic **resource allocation** and software installation. A spokesperson for Rackspace says ADS is only a tiny portion of...
...tools to allow the three types of code to intercommunicate regarding management and to comprehend **dependencies** among **applications** , hardware, and network capacity for the best system operation.

DESCRIPTORS: Computer **Resource** Management; Data Center Operations; Network Software; Operating Systems; WANs; Windows NT/2000; Windows Server 2003

```
Set     Items   Description
S1        240   AU=(KAMEL I? OR KAMEL, I?)
S2         52   AU=(ELBASSIONI K? OR ELBASSIONI, K?)
S3      10257   AU=(CHEN B? OR CHEN, B?)
S4          3   S1 AND S2 AND S3
S5         75   (S1 OR S2 OR S3) AND (GATEWAY? OR SERVER? OR ROUTER? OR FI-
              LESERVER?)
S6         21   S5 AND (MEMOR? OR SPACE? OR STORAGE? OR GIGAB? OR GIG OR G-
              IGS OR RAM OR SRAM)
S7         24   S4 OR S6
S8         19   RD (unique items)
S9         15   S8 NOT PY>2002
File   2:INSPEC 1969-2005/Apr W4
         (c) 2005 Institution of Electrical Engineers
File   6:NTIS 1964-2005/Apr W4
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2005/Apr W4
         (c) 2005 Elsevier Eng.  Info. Inc.
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9/5/3 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

7360342 INSPEC Abstract Number: B2002-10-6210L-033, C2002-10-5620W-026
Title: Bundles replacement in gateways
Author(s): Beizhong Chen; **Elbassioni, K.** ; **Kamel, I.**
Author Affiliation: Dept. of Electr. & Comput. Eng., Rutgers Univ., Piscataway, NJ, USA
Conference Title: Wireless LANs and Home Networks Connecting Offices and Homes. Proceedings of the International Conference on Wireless LANS and Home Networks p.79-88
Editor(s): Bing, B.
Publisher: World Scientific, Singapore
Publication Date: 2001 Country of Publication: Singapore xv+360 pp.
ISBN: 981 02 4826 1 Material Identity Number: XX-2002-00164
Conference Title: Proceedings of International Conference on Wireless LANS and Home Networks
Conference Sponsor: IEEE
Conference Date: 5-7 Dec. 2001 Conference Location: Singapore
Language: English Document Type: Conference Paper (PA)
Treatment: Theoretical (T); Experimental (X)
Abstract: This paper studies how to manage limited **memory** available in home **gateways** like STB. In the OSGi model, services are implemented in software bundles that can be downloaded separately from the Internet and executed in the **gateway** . OSGi specifications define a service dependency scheme that maps the relationship between services. The problem we solve is: when the **memory** is full, which service(s) will be stopped or kicked out of **memory** to start a new service. Note that stopping a given service means that we stop all the services that depend on it. Our goal is to minimize the total number of stopped services. Because of the service dependencies, traditional **memory** management techniques, such as LRU, best fit, first fit, worst fit are not suitable. This paper presents an optimal algorithm for the above service replacement problem. We also present a more efficient heuristic in terms of **memory** and running time. Preliminary experimental results are presented to evaluate the performance of the proposed algorithms. (11 Refs)
Subfile: B C
Descriptors: Internet; internetworking; open systems; performance evaluation; **storage** management
Identifiers: home **gateways** ; STB; optimal algorithm; service replacement ; performance evaluation; OSGi model; Internet; software bundles; service dependency scheme; stopped services; **memory** management
Class Codes: B6210L (Computer communications); C5620W (Other computer networks); C5670 (Network performance); C6150N (Distributed systems software); C6120 (File organisation)

9/5/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC

7320977 INSPEC Abstract Number: B2002-08-6150M-164, C2002-08-5640-112
Title: Efficient service management in home gateway
Author(s): **Elbassioni, K.** ; Beizhong Chen; **Kamel, I.**
Author Affiliation: Panasonic Inf. & Networking Tech. Lab., Princeton, NJ, USA
Conference Title: Proceedings 2002 IEEE 4th International Workshop on Networked Appliances (Cat. No.02EX525) p.225-33
Editor(s): Mink, A.
Publisher: IEEE, Piscataway, NJ, USA
Publication Date: 2002 Country of Publication: USA viii+284 pp.
ISBN: 0 7803 7259 X Material Identity Number: XX-2002-00242
Conference Title: Proceedings 2002 IEEE 4th International Workshop on Networked Appliances
Conference Sponsor: Multimedia Commun. Tech. Committee of the IEEE Commun. Soc.; U.S. Dept. Commerce Technol. Admin.; NIST
Conference Date: 15-16 Jan. 2002 Conference Location: Gaithersburg, MD, USA
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P)
Abstract: In this paper, we present two algorithms for service replacement in home **gateways** .. The algorithms take into consideration the priority value and dependencies in addition to the amount of **memory** occupied by each service. One algorithm uses dynamic programming techniques and gives an optimal solution for the above service replacement problem. However, this algorithm might require non-trivial CPU and **memory** resources. The second algorithm is based on heuristics and requires less time and **space** than the first one. We carry. simulation experiments to evaluate the effectiveness of our proposals and compare the performance between the two suggested algorithms. (11 Refs)
Subfile: B C
Descriptors: computer network management; dynamic programming; LAN interconnection; **memory** protocols; performance evaluation; telecommunication services
Identifiers: service replacement; home **gateways** ; priority value; **memory** ; dynamic programming; optimal solution; heuristics; simulation; performance; service management
Class Codes: B6150M (Protocols); B6210L (Computer communications); B6210C (Network management); B0260 (Optimisation techniques); C5640 (Protocols); C5620L (Local area networks); C1180 (Optimisation techniques); C5670 (Network performance)

9/5/9 **(Item 9 from file: 2)**
DIALOG(R)File 2:INSPEC

6338488 INSPEC Abstract Number: B1999-10-6430G-013, C1999-10-6160M-008
Title: A study on scheduling multiple priority requests in multimedia servers
Author(s): **Kamel, I.** ; Niranjan, T.
Author Affiliation: Panasonic Inf. & Networking Technol. Lab., Princeton, NJ, USA
Conference Title: Proceedings IEEE International Conference on Multimedia Computing and Systems Part vol.2 p.395-9 vol.2
Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA
Publication Date: 1999 Country of Publication: USA 2 vol. (xlix+909+1127) pp.
ISBN: 0 7695 0253 9 Material Identity Number: XX-1999-02047
U.S. Copyright Clearance Center Code: 0 7695 0253 9/99/$10.00
Conference Title: Proceedings of ICMCS99: IEEE Multimedia Systems '99: International Conference on Multimedia Computing and Systems
Conference Sponsor: IEEE Comput. Soc.; IEEE Circuit & Syst. Soc.; IEEE Commun. Soc.; IEEE Signal Process. Soc
Conference Date: 7-11 June 1999 Conference Location: Florence, Italy
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P)
Abstract: Multimedia **servers** store a large amount of media data of different format. Different data objects have different real time requirements. We present an empirical study on the performance of disk scheduling in the presence of different media types with different real time requirements. We also argue that using multiple queues to handle different data types is not the best way to handle objects with different priorities. Moreover we argue that using one queue per disk to organize objects with different real time requirements would be more suitable for multimedia **server** applications. We built a simulation model based on a real video **server** , PanaViss, produced by Panasonic. The experiments show that using multiple queues respects the priority hierarchy. However, this schema sometimes penalizes utilization of the disk. (15 Refs)
Subfile: B C
Descriptors: disc **storage** ; multimedia **servers** ; real-time systems; scheduling
Identifiers: multiple priority request scheduling; multimedia **servers** ; media data; data objects; real time requirements; disk scheduling; media types; multiple queues; data types; simulation model; real video **server** ; PanaViss; Panasonic; priority hierarchy
Class Codes: B6430G (Video on demand and video servers); C6160M (Multimedia databases); C5260D (Video signal processing); C6150N (Distributed systems software); C5320 (Digital storage)